



Application No. 09/904,831
Attorney Docket No. 5725.219-04

PATENT
Customer No. 22,852
Attorney Docket No. 5725.0219-04

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of:)
Roland De La METTRIE et al.) Group Art Unit: 1751
Application No.: 09/904,831) Examiner: L. Douyon
Filed: July 16, 2001)
For: OXIDATION DYE COMPOSITION)
FOR KERATIN FIBERS,)
COMPRISING NONIONIC)
AMPHIPHILIC POLYMER)

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Sir:

APPEAL BRIEF UNDER 37 C.F.R. § 1.192

In support of the Notice of Appeal filed May 21, 2003, and pursuant to 37 C.F.R. § 1.192, Appellants present in triplicate this brief and encloses herewith a check for the fee of \$320.00 required under 37 C.F.R. § 1.17(c). The period for filing the Appeal Brief has been extended four months to November 21, 2003 by the petition and fee filed herewith.

This appeal is in response to the rejection dated February 28, 2003, of claims 30-34, and 37-71, which are set forth in the attached Appendix. If any additional fees are required or if the enclosed payment is insufficient, Appellants request that the required fees be charged to Deposit Account No. 06-0916.

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I. Real Party In Interest

L'Oréal S.A. is the assignee of record.

II. Related Appeals and Interferences

The Appellant, Appellant's undersigned legal representative, and the assignee of record know of no other appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. Status Of Claims

Claims 30-34 and 36-71 are pending in this application. No claims are allowed. Claim 36 has been indicated to have allowable subject matter but to be dependent upon a rejected base claim. Accordingly, claim 36 is not included in the present appeal.

IV. Status Of Amendments

An amendment after appeal to current claim 47, pursuant to 37 C.F.R. § 1.116, is submitted concurrently with this brief. The amendment was made to address the rejection of claim 47 as indefinite under 35 U.S.C. § 112, second paragraph. Entry of the amendment, which corrects an obvious typographical error, would place claim 47 in better form for appeal.

V. Summary Of Invention

The invention concerns a composition for the oxidation dyeing of keratin fibers, such as hair, comprising: (1) at least one oxidation dye precursor; and (2) at least one nonionic amphiphilic polymer comprising at least one fatty chain and at least one hydrophilic unit, wherein the at least one nonionic amphiphilic polymer is chosen from: (a) celluloses modified with groups containing at least one fatty chain; and (b) hydroxypropyl guar modified with groups containing at least one fatty chain. See, e.g., claim 30.

It was known in the art to use a thickening agent in an oxidation dye composition to localize the dye composition on the hair when it is applied. Specification at p. 2, lines 3-12. It had been observed, however, that the traditional thickeners used in the art generally curbed the rise of the dye on the fibers, leading to dyed hair having a dull shade, and also required the use of a larger amount of dye, solvent, and/or surfactants to dissolve the dye. *Id.* at lines 13-19. In addition, it was observed that, after mixing with the oxidizing agent required for oxidation dyeing, traditional thickeners lost some of their gelled nature, giving rise to undesirable running of the dyeing composition onto the face or generally off the hair. *Id.* at lines 20-25.

It was discovered by the present inventors that the use of particular nonionic amphiphilic polymers in oxidation dyeing compositions provided compositions that, even after mixing with the oxidant, remained better localized at the point of application and gave more intense or more chromatic (more luminous) shades. *Id.* at p. 2, line 26- p. 3, line 12. As noted above, the nonionic amphiphilic polymers of the present invention comprise at least one fatty chain and at least one hydrophilic unit, and are chosen from celluloses modified with groups containing at least one fatty chain and from hydroxypropyl guar modified with groups containing at least one fatty chain.

The oxidative dye compositions containing these particular, nonionic, amphiphilic polymers are the subject of the present invention (claims 30-34, 36-54, 58, 59, and 67), as are processes for oxidation dyeing keratin fibers by applying to them a composition of the invention (claims 55-57, 60-62, and 68-70), and multi-compartment kits for dyeing keratin fibers using the composition of the invention (claims 63-66 and 71). *See also* specification at p. 3, line 27 – p. 7, line 1.

VI. Issues

- A. Whether claim 47 is indefinite under 35 U.S.C. § 112, second paragraph.**
- B. Whether claims 30-34 and 37-71 are obvious under 35 U.S.C. § 103(a) over Dubief (U.S. Pat. No. 5,700,456) in view of the *International Cosmetic Ingredient Dictionary*.**

VII. Grouping Of Claims

Each claim of this patent application is separately patentable, and upon issuance of a patent will be entitled to a separate presumption of validity under 35 U.S.C. § 282. For this appeal, however, Appellants wish to group the current rejected claims (claims 30-34 and 37-71) together so that for the rejection under 35 U.S.C. §103(a), the claims stand or fall together. As for the rejection under 35 U.S.C. §112, second paragraph, claim 47 stands on its own.

VIII. Argument

- A. Claim 47, as amended, is not indefinite under 35 U.S.C. § 112, second paragraph.**

Claim 47 stands rejected under 35 U.S.C. § 112, second paragraph. In particular, the Examiner indicated that formula (V) as found in claim 47 does not correspond to formula (V) as found in Appellants' specification at p. 17, line 7. Office Action dated February 28, 2003, p. 2, lines 8-13. As indicated in Section IV, above, Appellants have concurrently submitted an Amendment After Appeal, pursuant to 37 C.F.R. § 1.116, in which claim 47 is amended to add the missing bromide counter-ions found in formula (V) of Appellants' original specification. This amendment was made to correct an obvious typographical error. As pointed out by the Examiner, the addition of the bromide counter-ions to formula (V) in claim 47 is supported in

Appellants' original specification at p. 17, line 7. As such, no new matter was introduced in making this amendment.

Appellants respectfully submit that entry of this amendment by the Examiner renders moot the rejection of claim 47 under 35 U.S.C. § 112, second paragraph, and Appellants ask that it be withdrawn or reversed.

B. Claims 30-34 and 36-71 are not obvious under 35 U.S.C. § 103(a) over Dubief (U.S. Pat. No. 5,700,456) in view of the *International Cosmetic Ingredient Dictionary*.

Claims 30-34 and 36-71 stand rejected under 35 U.S.C. § 103(a) over Dubief (U.S. Pat. No. 5,700,456) in view of the *International Cosmetic Ingredient Dictionary*.

The Examiner contends that Dubief teaches hair treating compositions containing at least one ceramide and/or glyceramide, and at least one cationic polymer as claimed. Office Action dated February 28, 2003, at p. 3, lines 16-17. Furthermore, according to the Examiner, Dubief teaches that the disclosed compositions may contain a thickening agent, such as one sold under the trade name NATROSOL PLUS[®], that the compositions may be used for the oxidation dyeing of keratin fibers, that they can be in the form of a thickened liquid, and that the pH of the compositions can be in the range from 2 to 9. *Id.* at p. 3, line 19-p. 4, line 3. The Examiner admits, however, that Dubief does not teach the addition of the claimed nonionic, amphiphilic polymers to oxidation dye compositions. *Id.* at p. 4, lines 8-10.

The Examiner relies on the secondary reference, the *International Cosmetic Ingredient Dictionary* ("ICID"), for the teaching that NATROSOL PLUS[®], as disclosed in Dubief as an optional ingredient at col. 8, line 45, is also known to those skilled in the art by its technical name, "cetyl hydroxyethylcellulose." *Id.* at p. 4, lines 11-13

Based on a combination of these two references, the Examiner contends that the claimed compositions, methods, and multi-compartment kits would have been obvious to one skilled in the art at the time of invention because it would have been obvious to formulate a thickened composition for the oxidation dyeing of hair that contains an oxidation dye precursor, coupler, direct dye, cationic polymer, a nonionic amphiphilic polymer, and an oxidant because "such compositions and processes fall within the scope of those taught by Dubief." *Id.* at p. 4, lines 14-20. Furthermore, the Examiner alleges that it would have been obvious to one skilled in the art to present such compositions in the form of multi-compartment dyeing kits because "Dubief suggests such kits by teaching separate oxidant- and dye-containing compositions prior to application." *Id.* at p. 5, lines 10-12.

Appellants respectfully disagree with the Examiner's reading of Dubief and the rejection of the current claims as obvious for at least the following reasons: (1) no *prima facie* case of obviousness has been established; (2) Dubief teaches away from the presently claimed invention; and (3) the art of oxidation dyeing of keratin fibers is unpredictable and this unpredictability did not provide the necessary reasonable expectation of success for making the combination suggested by the Examiner.

1. No prima facie case of obviousness has been established

To establish a *prima facie* case of obviousness, an Examiner must meet certain basic criteria. Among other things, the Examiner must be able to point to some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Further, the Examiner must be able to show a

reasonable expectation of success exists for making the modification or combination.

See M.P.E.P. § 2143.

With respect to the first criterion, the Federal Circuit stated in *In re Lee* that the factual inquiry whether to combine references must be “thorough and searching” and “based on objective evidence of record.” *In re Lee*, 277 F.3d 1338, 1343 (Fed. Cir. 2002). The court also noted that “the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency’s conclusion.” *Id.*

Further, “[t]o establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant.” *In re Kotzab*, 217 F.3d 1365, 1371, 55 U.S.P.Q.2d (BNA) 1313 (Fed. Cir. 2000). Even when obviousness is based on a single reference, there must be such a showing. See *B.F. Goodrich Co. v. Aircraft Braking Sys. Corp.*, 72 F.3d 1577, 1582, 37 U.S.P.Q.2D (BNA) 1314, 1318 (Fed. Cir. 1996). Accordingly, the requirements discussed in *In re Lee* (a “thorough and searching” factual inquiry based on “objective evidence of record” and sufficiently explained and supported) are equally applicable in situations where it is proposed to modify a single reference, which is essentially what the Examiner is calling for in the present case, *i.e.*, since the ICID is relied upon only to define NATROSOL PLUS[®]. Those requirements have not been met here.

More specifically, further to the Examiner’s assertion¹ that the compositions of Dubief can be used for oxidative hair dyeing (citing col. 9, lines 18-25), Appellants

¹ See, *e.g.*, the sentence bridging pp. 3-4 of the Office Action dated February 28, 2003.

submit that Dubief's compositions are useful for many purposes, generally referred to throughout Dubief as the "treatment and protection of hair," only one of which is the dyeing of hair. See col. 9, lines 15-30. Moreover, Dubief discloses at col. 9, lines 19-21, that his hair dyes may contain oxidation dyes and/or direct dyes. Thickening agents are disclosed as optional additional ingredients, but in a *different portion of the reference*, which does not specifically refer to dyeing compositions. See col. 8, lines 36-47. Taking these aspects of Dubief into account, it can hardly be said that there is a suggestion in the cited art to modify Dubief as proposed by the Examiner by adding, as a thickener to its hair dyeing compositions, cetyl-modified hydroxyethyl cellulose (disclosed by ICID to be NATROSOL PLUS®) to obtain the presently claimed invention.

Further, with respect to the thickening agents, the ingredients for Dubief's compositions are disclosed via a series of laundry lists. NATROSOL PLUS® appears in one such extensive laundry list, cited by the Examiner and drawn to thickening agents, at col. 8, lines 36-47. The laundry list includes ten genera and ten named species. There is therefore nothing in Dubief that would have motivated one of ordinary skill to use any particular thickener with any given composition, let alone an oxidation dye composition. Moreover, even if a thickener were included, there would not be a reasonable possibility that the thickener could be added to give a successful **hair dye** product, let alone an **oxidative** hair dye product.

At most, Dubief suggests that if one needed to thicken a given composition for one of the many uses disclosed by Dubief, then a thickener from column 8 could be tried to see if it worked in the specific composition in light of the other ingredients and the intended use. As the Examiner knows, however, "obvious to try" is not the standard

against which obviousness is measured. See *In re O'Farrell*, 853 F.2d 894, 902 (Fed. Cir. 1988).

Finally, the Examiner relies on Example 6 of Dubief as teaching a thickened oxidative hair dyeing composition. The Examiner acknowledges that the nonionic, amphiphilic, modified hydroxyethyl cellulose thickening agent NATROSOL PLUS® is not included in Example 6, but contends that "[t]he fact remains that the compositions of Dubief, which can also be used for the oxidation dyeing of keratinous fibers (see col. 9, lines 18-20) can contain thickening agents such as NATROSOL PLUS® (see col. 8, lines 36-45), which is cetyl hydroxyethylcellulose." Final Office Action dated April 10, 2002, at p. 3. The Examiner concludes, "with these teachings, a person of ordinary skill in the art would be motivated to incorporate cetyl hydroxyethylcellulose into the composition of Dubief for use in oxidation dyeing of keratin fibers." *Id.* at pp. 3-4.

The Federal Circuit has held that the mere fact that a reference can be modified does not render the modification obvious unless the prior art suggests the desirability of the modification. *In re Mills*, 916 F.2d 680, 682 (Fed. Cir. 1990); MPEP § 2143.01 (emphasis in original). Under this reasoning, the sections of Dubief relied upon do not support the Examiner's ultimate conclusion. The Examiner has merely *assumed*, rather than established, that which is necessary for a prima facie case of obviousness: i.e., a specific motivation to modify or combine the teachings of the references with a basis in the references such that one skilled in the art would have had a reasonable expectation of success in making such a modification or combination. The rejection should be reversed for this reason alone.

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2. Dubief teaches away from the presently claimed invention

In addition to the lack of evidence in the references to support a "clear and particular" suggestion for their combination, Dubief provides no desirability or guidance for the combination proposed by the Examiner, and in fact teaches away from such a combination. Dubief's only dyeing example (Example 6) is already in thickened cream form. Dubief, while disclosing thickeners as possible ingredients for its various products, teaches by example that its oxidative dyeing compositions **do not require additional thickening agents**. As such, one skilled in the art would have been discouraged from adding any thickener to an oxidative dyeing composition. Therefore, there is no motivation in the reference to add any thickener, let alone a *specific* thickener, to such a composition.

Because the only suggestion in Dubief (with respect to oxidative dyeing compositions) is **not** to add a thickening agent, one of ordinary skill in the art would not have been motivated to use any thickening agent, let alone NATROSOL PLUS®. See *Winner Int'l. Royalty Corp. v. Wang*, 202 F.3d 1340, 1349, 53 U.S.P.Q.2d 1580 (Fed. Cir. 2000). The lack of any need or reason to add a thickening agent would not have motivated one skilled in the art to add any thickener, let alone NATROSOL PLUS®.

Thus, the Examiner does not appear to have considered the various parts of Dubief in concert, but instead attempts to combine only the disclosures that would lead to the presently claimed invention. However, the mere identification in a cited reference of individual claim elements or components cannot serve as the basis for a rejection.

See *In re Kotzab*, 217 F.3d 1365, 1370 (Fed. Cir. 2000). Instead, "[a] prior art reference

must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention." *Id.* at 1371. Doing otherwise constitutes the improper use of hindsight to cobble together the claimed invention from separate pieces of the reference.

For this additional reason, the Examiner has not established a *prima facie* case of obviousness and Appellants respectfully request that the rejection be reversed with respect to all claims.

3. The unpredictability of the art does not provide the necessary reasonable expectation of success in modifying Dubief.

As argued above, there is simply no support for the Examiner's attempt to draw from different parts of the Dubief reference in an attempt to modify the examples therein. One of ordinary skill in the art would simply not have been motivated to make all the necessary choices from Dubief's disclosure suggested by the Examiner. Further, even if there were motivation in Dubief for the addition of NATROSOL PLUS® to an oxidative hair dyeing composition, Dubief does not provide any basis for a reasonable expectation of success if such modifications were made. In fact, those skilled in the art recognize that not all thickening agents are equivalent and that it takes considerable effort to find a thickener that works consistently and successfully in any given oxidative dyeing system.

Specifically, those skilled in the art know that the selection of an agent capable of properly thickening an oxidative hair dye composition is an unpredictable business.

That this unpredictability was known to those skilled in the art at the time of the Appellants' invention is graphically illustrated by several documents of record,

particularly U.S. Patent No. 4,776,855 to Pohl et al. ("Pohl"), U.S. Patent No. 5,393,305 to Cohen et al. ("Cohen"), and U.S. Patent No. 5,376,146 to Casperson et al. ("Casperson")². As discussed below, in view of the knowledge of one of ordinary skill in the art (as demonstrated in Pohl, Cohen and Casperson) regarding the unpredictability of selecting thickening agents associated with oxidative hair dyes, there simply would have been no reasonable probability of success at the time of Appellants' invention to use the thickening agents of the claimed invention in Dubief's oxidative hair dye compositions.

a. The Pohl Patent

Pohl articulates the problem of finding a thickener for hair treatment formulations that is stable in a hydrogen peroxide oxidizing composition. Pohl reported that the thickener Acrysol ICS, an acrylic anionic polymer, was surprisingly stable when added to hydrogen peroxide and was the key ingredient of the oxidizing composition component of his oxidative hair dye compositions. See Pohl, col. 3, lines 6-11. According to Pohl's representations to the PTO, Acrysol-ICS was the one acrylic thickener that was stable, *i.e.*, the only acrylic thickener that worked. See Pohl Patent prosecution history,³ Amendment dated November 11, 1986. (Acrysol ICS is an **anionic** polymer and is presently supplied by Rohm and Haas under the trademark Aculyn 22®).

² All three of these patents were submitted in an IDS dated October 10, 2001. The Pohl patent was reissued as Re. 33786 on January 7, 1992, and this document was also submitted in the IDS filed on October 10, 2001.

³ The prosecution history of the Pohl patent has been made of record in the prosecution history of Applicants' parent U.S. Patent No. 6,010,541 ("the '541 patent"), and it became publicly available as of the issuance date of the Pohl patent. In other words, the entire prosecution history is just as much a teaching in the art as of that date, *i.e.*, prior art, as is the patent itself.

While Pohl initially disclosed a genus of potential polymers, by the time of Appellants' invention, one of ordinary skill in the art would have known that not all of the polymers of the Pohl genus worked. During the reissue of the Pohl patent, Pohl confirmed this by urging that Acrysol-ICS was the only polymer that worked.

Therefore, considering the teachings of Pohl, the skilled artisan would not have had any reasonable expectation that any polymer other than Acrysol-ICS would have been successful as a thickener in oxidative dye compositions. This lack of reasonable expectation of success in adding thickeners to oxidative dye compositions was subsequently confirmed by others, as discussed below.

b. The Cohen Patent

Cohen heavily emphasizes the unpredictability associated with oxidative hair dyes, setting forth various bases for this unpredictability throughout the patent. For example, Cohen teaches, see col. 1, lines 17-60, that oxidative dyes having a two-part (i.e., dye lotion and developer) system, as recited therein, involve a delicate balance designed to satisfy a number of conditions including: (1) stability of the formulation to ensure a reasonable shelf life; (2) rheological properties that allow ready distribution of product without dripping and running; (3) rapid diffusion of the dye precursors from the dye mixture into the hair fiber; (4) ready rinseability from the hair with water; (5) inclusion of functionally effective conditioning agents; (6) comparable viscosities of the lotion and developer to facilitate mixing; and (7) rapid dyeing effect.

Cohen provides a lengthy discussion of the defects of the prior art, including a discussion of the Pohl Reissue patent referred to above. See col. 3, lines 13-29. Like Pohl, Cohen struggled with the issue of finding a suitable polymer for use in a developer

containing a peroxide oxidizing agent and for assisting in the formation of a gel. See col. 10, lines 26-31. Cohen describes his highly specific anionic polymer as typically a copolymer of acrylic acid and acrylic esters such as those sold under the trademarks Aculyn[®] 22 and 33 by Rohm and Haas. See col. 10, lines 38-42. Pohl's anionic Acrysol-ICS thus apparently falls within the genus of Aculyn compounds disclosed by Cohen. Cohen, however, uses only Aculyn 33[®] in his examples.

In attempting to remedy the defects of the prior art, Cohen focuses on the importance, *i.e.*, the unpredictability, of his selection of the anionic polymer for use in the developer as a gel former. See col. 8, lines 59-61 and col. 10, lines 26-31. To highlight further Cohen's emphasis on the "importance" and "criticality" of selection of the anionic polymer as a gel former in the oxidative dye composition, Appellants refer to statements made in the prosecution history of Cohen.⁴ In that prosecution history, Cohen underscored the unpredictability involved in selecting anionic polymers to be used as gel formers in his compositions. For example, Cohen stated that although those of skill in the art knew to "incorporate water-insoluble anionic polymers into the developer component [to] . . . produce a thickening effect when the developer is added to the lotion," experience demonstrated that "developers containing such anionic polymers are difficult to formulate because the viscosity of the resulting mixture is not readily controllable." Response dated August 4, 1994, at 16-17.

⁴ The prosecution history of the Cohen patent was made of record in the prosecution history of the '541 patent and it became publicly available as of the issuance date of the Cohen patent. In other words, the entire prosecution history is just as much a teaching in the art, *i.e.*, prior art, as of that date as is the patent itself.

Cohen then emphasized how his invention, using anionic copolymers of acrylic acid and acrylic acid esters, surprisingly obtained the properties disclosed. Specifically, Cohen stated to the PTO that his inventive two-part oxidative hair dye composition produced "a suitably viscous gel" that "provides superior, durable conditioning and improved rinseability, as well as greater viscosity control. . . ." *Id.* at 17. Cohen also noted that, "surprisingly . . . the mixture of the cationic polymer and anionic polymer . . . is a notable improvement over the prior art, including the cited Pohl and Sokol references, either taken alone or in combination." *Id.* The Pohl reference referred to by Cohen is the very Pohl discussed above.

Cohen further emphasized in the file history the noninterchangeability of anionic polymers in general with the specific water-insoluble anionic acrylic polymers he found useful, *i.e.*, the anionic copolymers of acrylic acid and acrylic acid esters. Cohen took the position that the primary reference applied against his claims, the Pohl patent (notably, Pohl is a co-inventor of the Cohen patent), touted a specific anionic polymer, Aculyn 22[®] (Acrysol-ICS), as a key ingredient. *Id.* Although Cohen's disclosure states that Aculyn polymers in general were useful in his invention (col. 10, lines 32-37), the specification includes only examples using Aculyn 33[®] in the developer. See col. 12, Examples 1-10. Importantly, Cohen's subsequent experience demonstrated that in fact not all Aculyn copolymers were useful. Cohen discovered that his composition was unpredictable and that Aculyn 22[®], the only polymer that Pohl had found useful, itself failed to control viscosity even over relatively minor concentration changes. See *Cohen prosecution history*, Response dated August 4, 1994, at 17-18.

As evidentiary support for the unacceptability of Aculyn 22[®], Cohen filed, along with the August 1994 response, the declaration of Dr. Stanley Pohl himself. Dr. Pohl compared the viscosity characteristics of Aculyn 22[®] against the preferred anionic polymer of Cohen, Aculyn 33[®], and determined that the viscosity of Aculyn 22[®] is unacceptably much more volatile and sensitive to concentration changes. *Id.* at 18.

Accordingly, Cohen amended his main claim to exclude Aculyn 22[®], and added claims directed specifically to Aculyn 33[®]. At page 19 of the associated amendment, Cohen urged that Aculyn 22[®] is "very different" from Aculyn 33[®]:

For the foregoing reasons, Applicants believe that the superiority of their claimed anionic polymer clearly supports the patentability of their invention. To this end, Applicants have specifically narrowed their main claim to define the anionic polymer so that it does not include within its scope Aculyn 22, which as described in the CTFA, is very different from the CTFA definition of Aculyn 33.

Thus, Cohen reinforces the unpredictability of the subject matter of Pohl. Indeed, Cohen emphasizes that this unpredictability comes, in part, from the delicate balance of conditions that must be considered when designing oxidative hair dyes.

In light of this well-recognized unpredictability of anionic polymers as thickeners in the oxidative dyeing art, the mere mention in Dubief of the nonionic polymer NATROSOL PLUS[®] as a potential thickener in no way provides a reasonable expectation that, on the off-chance that this particular nonionic thickener was added to an oxidative hair dyeing composition falling within the scope of Dubief, a successful composition would result.

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c. The Casperson Patent

The disclosure of Casperson is strikingly similar to that of Cohen; the same assignee filed both on the same day. Just like Cohen, Casperson teaches the unpredictability associated with oxidative hair dyes, setting forth various bases for this unpredictability throughout his patent. The specification provides a discussion identical to that in Cohen regarding the delicate balancing involved in making two-part oxidative dyes such that they satisfy a number of conditions. See col. 1, lines 16-59. Casperson was also looking to discover developers and lotions that can be readily formed into a gelled mixture. See col. 3, lines 35-39.

Like Cohen, Casperson engages in a lengthy discussion of the defects of the prior art, also including a discussion of the Pohl Reissue. See col. 3, lines 10-26. Following this discussion, Casperson proposes to remedy those defects by providing a two part oxidative hair-coloring composition including a substantially water-insoluble anionic acrylic polymer. See col. 3, lines 47-62. Also like Cohen, Casperson focuses on the importance of the selection of the anionic polymer for use in the developer. See col. 9, lines 63-68.

Casperson points out that certain anionic polymers avoid these defects. Casperson refers to certain polymers available and mentions both Aculyn 22[®] (used in Pohl as described above) and Aculyn 33[®] (used in Cohen as described above). See col. 10, lines 22-29. In other words, in this particular invention of Casperson, Aculyn 22[®] could be used, but in the invention of Cohen, filed the same day by the same assignee, Aculyn 22[®] was inappropriate. This underscores the unpredictability of polymeric thickeners known to those skilled in the oxidative dyeing arts.

In support of their position, Appellants also refer to the prosecution history of Casperson,⁵ where Casperson further discussed the unpredictability involved in selecting polymers to be used in his oxidative dye compositions. In a March 7, 1994, Office Action, at page 7, the Examiner argued that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to at least partially substitute the anionic polymer of Pohl (Acrysol-ICS) for an anionic polymer of Yoshihara" to obtain the Casperson invention. In response, Casperson emphasized the particular importance of the specific ingredients of his two part composition and how this specific combination surprisingly and unexpectedly could be "readily and easily formed into a gelled mixture having an appropriate viscosity to remain on the hair for a sufficient period of time to achieve the desired hair coloring effect." Amendment dated June 7, 1994, at 14.

Casperson made this surprising breakthrough based on experiments utilizing only either Aculyne 22[®] or Aculyne 33[®], even though Cohen, in his invention, was unable to use Aculyne 22[®]. Casperson, therefore, teaches those skilled in the art that it is very surprising that his two-part composition was effective. Given this unpredictability, Casperson admitted that his invention would not extend to any other anionic polymer:

It has also been known to incorporate water-insoluble anionic polymers into the developer component. Such polymers produce a thickening effect when the developer is added to the alkaline dye lotion. Unfortunately, the use of **these or any other anionic polymers** with quaternary compounds is normally disadvantageous because the anionic polymers tend to deactivate the quaternary

⁵ The prosecution history of the Casperson patent was made of record in the prosecution history of the '541 patent and it became publicly available as of the issuance date of the Casperson patent. In other words, the entire prosecution history is just as much a teaching in the art as of that date as is the patent itself.

conditioning compounds by complexation. Additionally, experience has shown that developers containing anionic polymers are difficult to formulate in that the viscosity of the resulting mixture is not readily controllable.

Id. at 15; emphasis added.

Thus, Casperson reinforces the unpredictability of the subject matter of both Cohen and Pohl. Casperson also thus specifically reinforces the conclusions that in light of the well-recognized unpredictability in the oxidative dyeing art, the mere mention in Dubief that certain polymers (such as nonionic NATROSOL PLUS®) are optionally used in compositions that in different embodiments may be dyeing compositions in no way provides a reasonable expectation of success.

d. Pohl, Casperson, and Cohen show the unpredictability of associative polymers generally

Although the Pohl application, Cohen, and Casperson discuss the use of **anionic** associative polymers, and the present claims recite **nonionic** associative polymers, their disclosures demonstrate the broader proposition that not all polymers are equivalent. Moreover, Dubief himself teaches the equivalence (in his disclosure) of nonionic and anionic associative polymers by failing to distinguish between them. See col. 8, lines 43-45, where Dubief recites only “associative thickeners bearing fatty chains of the natural type.” Both anionic and nonionic associative polymers are covered by this broad description. Thus, Pohl, Cohen, and Casperson support Appellants’ position that one of skill in the art would not have had a reasonable expectation of success by using nonionic associative thickening polymers in an oxidative hair dyeing composition of Dubief because of the unpredictability associated with the selection of thickeners.

This known unpredictability in selecting thickeners for oxidative hair dye compositions combined with the lack of motivation to thicken Dubief's oxidative hair dyeing compositions would not engender an expectation of success if one must choose ingredients randomly from laundry lists, such as those of Dubief. Indeed, this unpredictability would cause one not to know what to expect by adding a cetyl-modified hydroxyethyl cellulose thickener, or any thickener, to the already thick composition of Dubief's example 6. Not knowing what to expect is not a reasonable expectation of success. As a result, the alleged prima facie case of obviousness cannot stand.

IX. Conclusion

In view of the foregoing, Appellants submit that the claimed invention is not obvious over Dubief in view of ICID. Reconsideration and withdrawal of the rejection are respectfully requested.

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To the extent that any additional extension of time under 37 C.F.R. § 1.136 is required to obtain entry of this Appeal Brief, such extension is hereby respectfully requested. If there are any fees due under 37 C.F.R. §§ 1.16 or 1.17 which are not enclosed herewith, including any fees required for an extension of time under 37 C.F.R. § 1.136, please charge such fees to our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
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Dated: November 4, 2003

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Appendix

1-29. Cancelled

30. A composition for the oxidation dyeing of keratin fibres comprising:

- at least one oxidation dye precursor, and
- at least one nonionic amphiphilic polymer comprising at least one fatty chain

and at least one hydrophilic unit, said at least one nonionic amphiphilic polymer being chosen from:

- (1) celluloses modified with groups containing at least one fatty chain, and
- (2) hydroxypropyl guar modified with groups containing at least one fatty chain.

31. A composition according to Claim 30, wherein said keratin fibres are human keratin fibres, and wherein said composition further contains a medium suitable for dyeing.

32. A composition according to Claim 31, wherein said human keratin fibres are hair.

33. A composition according to Claim 32, wherein said celluloses are hydroxyethyl celluloses modified with groups containing at least one group chosen from alkyl, arylalkyl, and alkylaryl.

34. A composition according to Claim 33, wherein said hydroxyethyl celluloses contain at least one C₈-C₂₂ alkyl group.

35. Cancelled.

36. A composition according to Claim 32, wherein said celluloses contain at least one polyalkylene glycol alkylphenyl ether group.

37. A composition according to Claim 32, wherein said at least one oxidation dye precursor is chosen from ortho- and para- phenylenediamines, bis(phenyl)alkylenediamines, ortho- and para- aminophenols, heterocyclic bases, and acid addition salts thereof.

38. A composition according to Claim 32, wherein said at least one oxidation dye precursor is present in concentrations ranging from 0.0005 to 12% by weight relative to the total weight of the composition.

39. A composition according to Claim 30, wherein said composition further contains at least one coupler.

40. A composition according to Claim 39, wherein said at least one coupler is chosen from meta-phenylenediamines, meta-aminophenols, meta-diphenols, heterocyclic couplers, and acid addition salts thereof.

41. A composition according to Claim 40, wherein said at least one coupler is present in concentrations ranging from 0.0001 to 10% by weight relative to the total weight of the composition.

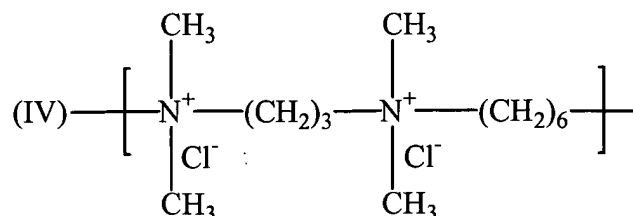
42. A composition according to Claim 40, wherein said acid addition salts are chosen from hydrochlorides, hydrobromides, sulphates, tartrates, lactates, and acetates.

43. A composition according to Claim 37, wherein said acid addition salts are chosen from hydrochlorides, hydrobromides, sulphates, tartrates, lactates, and acetates.

44. A composition according to Claim 31, wherein said composition further comprises at least one direct dye.

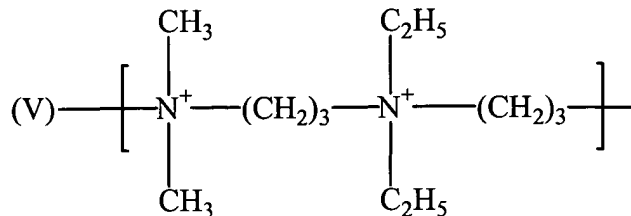
45. A composition according to Claim 31, wherein said composition further comprises at least one additional polymer chosen from cationic and amphoteric substantive polymers.

46. A composition according to Claim 45, wherein said at least one additional polymer is a quaternary polyammonium polymer comprising repeating units corresponding to formula (IV) below:



and wherein the molecular weight of said at least one additional polymer, determined by gel chromatography, ranges from 9500 to 9900.

47. A composition according to Claim 45, wherein said at least one additional polymer is a quaternary polyammonium polymer comprising repeating units corresponding to formula (V) below:



and wherein the molecular weight of said at least one additional polymer, determined by gel chromatography, is about 1200.

48. A composition according to Claim 31, wherein said composition further comprises at least one reducing agent which is present in an amount ranging from 0.05 to 3% by weight relative to the total weight of the composition.

49. A composition according to Claim 31, wherein said composition further comprises an oxidizing agent.

50. A composition according to Claim 49, wherein said composition has a pH ranging from 4 to 11.

51. A composition according to Claim 49, wherein said oxidizing agent is chosen from hydrogen peroxide, urea peroxide, alkali metal bromates and ferricyanides, and persalts.

52. A composition according to Claim 51, wherein said oxidizing agent is an aqueous hydrogen peroxide solution having a titre ranging from 2.5 to 40 volumes.

53. A composition according to Claim 52, wherein said at least one nonionic amphiphilic polymer is present in an amount ranging from 0.05 to 10% by weight relative to the total weight of the composition.

54. A composition according to Claim 53, wherein said at least one nonionic amphiphilic polymer is present in an amount ranging from 0.2 to 5% by weight relative to the total weight of the composition.

55. A process for the oxidation dyeing of keratin fibres comprising the steps of:

applying to said fibres a composition for the oxidation dyeing of keratin fibres comprising:

- at least one oxidation dye precursor, and

- at least one nonionic amphiphilic polymer comprising at least one fatty chain and at least one hydrophilic unit, said at least one nonionic amphiphilic polymer being chosen from:

- (1) celluloses modified with groups containing at least one fatty chain, and
 - (2) hydroxypropyl guar modified with groups containing at least one fatty chain; and
- applying an oxidizing agent to said fibres in alkaline, neutral or acidic medium to develop color.

56. A process according to Claim 55, wherein said keratin fibres are human keratin fibres.

57. A process according to Claim 56, wherein said human keratin fibres are hair.

58. A composition for the oxidation dyeing of keratin fibres comprising:

- a dye composition comprising:

- at least one oxidation dye precursor, and

- at least one nonionic amphiphilic polymer comprising at least one fatty chain and at least one hydrophilic unit, said at least one nonionic amphiphilic polymer being chosen from:

- (1) celluloses modified with groups containing at least one fatty chain, and

- (2) hydroxypropyl guar modified with groups containing at least one fatty chain; and

- an oxidizing composition comprising an oxidizing agent, wherein said oxidizing composition does not contain any of said nonionic amphiphilic polymer.

59. A composition for the oxidation dyeing of keratin fibres comprising:

- dye composition comprising:

- at least one oxidation dye precursor, and

-- at least one nonionic amphiphilic polymer comprising at least one fatty chain and at least one hydrophilic unit, said at least one nonionic amphiphilic polymer being chosen from:

- (1) celluloses modified with groups containing at least one fatty chain, and
- (2) hydroxypropyl guar modified with groups containing at least one fatty chain;

and

- an oxidizing composition comprising an oxidizing agent, wherein said oxidizing composition further comprises at least one nonionic amphiphilic polymer comprising at least one fatty chain and at least one hydrophilic unit, said at least one nonionic amphiphilic polymer being chosen from:

- (1) celluloses modified with groups containing at least one fatty chain, and
- (2) hydroxypropyl guar modified with groups containing at least one fatty chain.

60. A process for the oxidation dyeing of keratin fibres comprising the steps of:

-applying to said fibres at least one composition comprising, in a medium which is suitable for dyeing:

- at least one oxidation dye precursor, and

- at least one nonionic amphiphilic polymer comprising at least one fatty chain and at least one hydrophilic unit, said at least one nonionic amphiphilic polymer being chosen from:

- (1) celluloses modified with groups containing at least one fatty chain, and
- (2) hydroxypropyl guar modified with groups containing at least one fatty

chain; and

-applying an oxidizing composition comprising an oxidizing agent to said fibres in alkaline, neutral, or acidic medium to develop color, wherein said oxidizing composition does not contain any of said nonionic amphiphilic polymer.

61. A process according to Claim 60, wherein said keratin fibres are human keratin fibres.

62. A process according to Claim 61, wherein said human keratin fibres are hair.

63. A multi-compartment kit for dyeing keratin fibres comprising a first compartment and a second compartment, wherein said first compartment contains a composition for the oxidation dyeing of keratin fibres comprising:

- at least one oxidation dye precursor, and
- at least one nonionic amphiphilic polymer comprising at least one fatty chain and at least one hydrophilic unit, said at least one nonionic amphiphilic polymer being chosen from:

(1) celluloses modified with groups containing at least one fatty chain, and

(2) hydroxypropyl guar modified with groups containing at least one fatty chain;

and

wherein said second compartment contains an oxidizing composition comprising an oxidizing agent in a medium which is suitable for dyeing.

64. A multi-compartment kit or device according to Claim 63, wherein said keratin fibres are human keratin fibres.

65. A multi-compartment kit or device according to Claim 64, wherein said human keratin fibres are hair.

66. A multi-compartment kit for dyeing keratin fibres comprising a first compartment and a second compartment, wherein said first compartment contains a composition for the oxidation dyeing of keratin fibres comprising:

- at least one oxidation dye precursor, and
- at least one nonionic amphiphilic polymer comprising at least one fatty chain and at least one hydrophilic unit, said at least one nonionic amphiphilic polymer being chosen from

(1) celluloses modified with groups containing at least one fatty chain, and

(2) hydroxypropyl guar modified with groups containing at least one fatty chain;

and

wherein said second compartment contains an oxidizing composition comprising an oxidizing agent used in a medium which is suitable for dyeing, wherein said oxidizing composition does not contain any of said nonionic amphiphilic polymer.

67. A ready-to-use composition for the oxidation dyeing of keratin fibres comprising:

- at least one oxidation dye precursor,

- at least one nonionic amphiphilic polymer comprising at least one fatty chain and at least one hydrophilic unit, said at least one nonionic amphiphilic polymer being chosen from:

(1) celluloses modified with groups containing at least one fatty chain, and

(2) hydroxypropyl guar modified with groups containing at least one fatty chain;

and

- an oxidizing agent.

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68. A process for the oxidation dyeing of keratin fibres comprising the steps of:

-applying to said fibres at least one composition comprising, in a medium which is suitable for dyeing:

- at least one oxidation dye precursor, and
- at least one nonionic amphiphilic polymer comprising at least one fatty chain and at least one hydrophilic unit, said at least one nonionic amphiphilic polymer being chosen from:

(1) celluloses modified with groups containing at least one fatty chain, and
(2) hydroxypropyl guar modified with groups containing at least one fatty chain; and

-applying an oxidizing composition comprising an oxidizing agent to said fibres in alkaline, neutral, or acidic medium to develop color, wherein said oxidizing composition further comprises at least one nonionic amphiphilic polymer comprising at least one fatty chain and at least one hydrophilic unit, said at least one nonionic amphiphilic polymer being chosen from:

(1) celluloses modified with groups containing at least one fatty chain, and
(2) hydroxypropyl guar modified with groups containing at least one fatty chain.

69. A process according to Claim 68, wherein said keratin fibres are human keratin fibres.

70. A process according to Claim 69, wherein said human keratin fibres are hair.

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71. A multi-compartment kit for dyeing keratin fibres comprising a first compartment and a second compartment, wherein said first compartment contains a composition for the oxidation dyeing of keratin fibres comprising:

- at least one oxidation dye precursor, and
- at least one nonionic amphiphilic polymer comprising at least one fatty chain and at least one hydrophilic unit, said at least one nonionic amphiphilic polymer being chosen from

- (1) celluloses modified with groups containing at least one fatty chain, and

- (2) hydroxypropyl guar modified with groups containing at least one fatty chain;

and

wherein said second compartment contains an oxidizing composition comprising an oxidizing agent used in a medium which is suitable for dyeing, wherein said oxidizing composition further comprises at least one nonionic amphiphilic polymer comprising at least one fatty chain and at least one hydrophilic unit, said at least one nonionic amphiphilic polymer being chosen from:

- (1) celluloses modified with groups containing at least one fatty chain, and

- (2) hydroxypropyl guar modified with groups containing at least one fatty chain.